

NOTES ON ALISMATACEAE

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1. SAGITTARIA PLANITIANA Agostini, sp. nov.

Herba annua ut videtur. Folia emersa, late ovatis, 4.5-8.0 cm longis, 5.0-9.5 cm latis, basi truncatis vel subcordatis, apice rotundatis; petiolis 18-28 cm longis. Scapi simplices, 8.0-40.0 cm longis, floribus 2-verticillaribus, scapis infra crassis. Bracteae verticilli primi 1.5-3.0 cm longae, 0.5-1.4 cm latae, ad basim libris; bracteis verticilli secundi 1.0-2.3 cm longis, 0.5-1.0 cm latis, imbricatis, ad scapum adpressis. Pedicelli ca 1.5 cm longi, florum femineorum erecti et crassi; florum masculorum filiformi recurvati, 2.0-2.8 cm longi. Flores feminei: sepalis 1.4-1.5 cm longis, 2-3 cm latis, ad maturitatem receptaculo adpressis; petalis ca 2 cm longis, ca 0.9 cm latis, albis videtur, cum coronis staminibus functionalibus. Flores masculini: staminibus numerosis, filamentis linearibus, antheris ca 2.1 mm longis. Fructus: capitulis maturis 2-3 cm diam; acheniis laevis, 2.5-3.0 mm longis, 1.0-1.1 mm latis; rostris 0.4-0.5 mm longis.

Herb apparently annual. Leaves emersed, widely ovate, 4.5-8 cm long, 5-9.5 cm wide, base truncate to subcordate, the apex rounded, the petioles 18-28 cm long. Scapes simple, 8-40 cm long, with two whorls of flowers, thicker below the first whorl. Bracts of the first whorl 1.5-3 cm long, 0.6-1.4 cm wide, free at the base, the ones of the second whorl are 1-2.3 cm long and 0.5-1 cm wide, overlapping and appressed to scape. Pedicels ca. 1.5 cm long, erect and thick in the pistillate flowers; 2-2.8 cm long, recurved and filiform in the staminate flowers. Pistillate flowers with a ring of functional stamens; sepals 1.5-1.4 cm long, 3-2 cm wide, closely appressed to the receptacle at maturity; petals ca. 2 cm long, ca. 0.9 cm wide, apparently all white. Staminate flowers with numerous stamens, the filaments linear, the anthers ca. 2.1 mm long. Mature pistillate heads 2-3 cm in diameter; achenes 2.5-3 mm long, 1-1.1 mm wide, narrowly winged, ellipsoid or obovoid and laterally compressed, the faces smooth; the beak 0.4-0.5 mm long.

Type: VENEZUELA, Edo. Portuguesa: Marsh in llanos, just west of Guanare, alt. 180 m, August 25, 1966, Julian A. Steyermark & Marvin Rave 96484 (Holotype NY, Isotype VEN).

Paratype: VENEZUELA, Edo. Guárico: Lagoon of Mesa de El Sombrero, in mud, September 10, 1927, H. Pittier 12473 (NY).

S. rhombifolia seems to be the closest relative, from which S. planitiana differs mainly by the shape of the leaves, the number of whorls in the inflorescence, and the shape and size of the fruits. It is probable that this new species will prove to have a wider range of leaf shapes and sizes than the ones shown by the two collections at hand. The name comes from the fact that this species appears to be restricted to the Great Plains of Central Venezuela.

2. Key to the related species of *Sagittaria* growing in the Venezuelan llanos.
1. Leaf blades typically aerial and spreading; achenes with narrow and entire wings, 2.5-5.5 mm long
 2. Leaves widely ovate, base truncate or subcordate, apex rounded; inflorescences with 2 whorls of flowers; pistillate flowers lacking recurved pedicels; mature achenes 2.5-3 mm long
S. planitiana Agost.
(Plate I, C & D)
 2. Leaves linear to ovate, base cuneate to obtuse, apex acute to acuminate; inflorescences with 3-10 whorls of flowers; pistillate flowers usually with recurved pedicels; mature achenes 3.5-5.5 mm long
S. rhombifolia Cham.
(Plate I, E & F)
 1. Leaf blades typically floating, base crenate-winged, 1.5-3.5 mm long
base cordate; achenes
S. guyanensis HBK.
ssp. guyanensis.
(Plate I, A & B)
3. Echinodorus fluitans Fassett, a new record for Venezuela. This species has been collected in the state of Falcón, south of Píritu (J. A. Steyermark 95514). It was previously known only from the type collection made in the Department of Magdalena in Colombia.

Plate I

A & B. *Sagittaria guyanensis* HBK. ssp. *guyanensis*

C & D. *Sagittaria planitiana* Agost.

E & F. *Sagittaria rhombifolia* Cham.

Scale shown for A, C & E equals 1 cm, and for B, D & F equals 1 mm.

Plate I

